



承認書

APPROVE SHEET



敬請承認如下之形式規格書：

客戶名稱

CUSTOMER:

貴公司製品名

CUSTOMER PN:

本公司製品名：

PRODUCT PN:

自锁/无锁开关

貴公司規格

APPROVAL DAT:

本公司規格：

PRODUCT CODE:

EL-7701 自锁/无锁

客戶料號：

CUSTOMER NO.:

本公司規格書編號：

PRODUCT DRAWING NO.:

新品承認
NEW APPROVE

APPROVAL
批 准

CHECK
審 查

DESIGN
設 計

規格變更再承認
CHANGE CODE APPROVE AGAIN

DATE:

DATE:

DATE:

材料變更再承認
CHANGE MATERIAL APPROVE AGAIN

貴公司承認欄

APPROVAL SIGNATURES

請於____年____月____日前承認返回
PLEASE RETURN TO ADMIT XUNIANRUI

日期 DATE:_____

深圳市亿利百斯特电子有限公司

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1. 一般特性 General Characteristics

1.1 额定值(Rating Value): DC30V 0.1A(max.) DC 2V 10μA(min.)

1.2 工作温度(Work Temperature Range): -10°C~70°C

1.3 存贮温度(Store Temperature Range): -20°C~80°C

1.4 正常测试条件(未有特殊说明量测在以下条件进行):

General test condition (Tests and measurements shall be made under the following standard conditions unless otherwise specified):

正常温度: 5°C~35°C 相对湿度: 45%~85% RH 气压: 8,600~10,600帕

Temperature: 5°C~35°C Relative humidity: 45%~85% Air pressure: 8,600~10,600 pa

2. 产品外观要求 Appearance Requirement

2.1 产品外形结构紧凑,无配合不良。

The structure of product is compact, and assembly of parts has no badness.

2.2 产品塑胶部件无严重缩水、披锋、欠注、斑点、破损或变形现象。

The plastic parts of product have no serious defects such as very serious shrink, scarcity, fleck, disrepair, transmutation, etc.

2.3 产品引脚和外壳无严重氧化、脏污、变形、毛刺或电镀不良。

Lead feet and shell have no serious defects such as oxidation, smudge, disrepair, burr, defects on plating.

2.4 开关操作顺畅,节奏感强,无明显卡塞现象,(自锁开关锁芯锁住后,允许导芯倾斜正负2°)

Operating switch is unhindered, rhythmed, and there is not palpable clag. (After the keystoke is locked, it is normal that the keystoke tilt to one side plus or minus 2°.)

2.5 产品结构及尺寸参见产品规格图纸。

Construction and dimensions: Refer to individual product drawing.

3. 电器特性 Electronic Characteristics

No.	项目 Item	测试方法 Test Method	测试设备 Equipment	特性要求 Requirements
3.1	接触电阻 Contact Resistance	在低电流(<100mA)条件下测试。 Measured at low current (100mA or less).	低电阻测试仪 Low Resistance Meter	100mΩ (max.)
3.2	绝缘阻抗 Insulation Resistance	测试相邻脚之间,引脚与外壳之间的绝缘阻抗(DC250V) Measurement shall be made between adjacent terminals, between terminal and shell (DC250V)	绝缘测试机 Insulation Resitance Tester	100MΩ (min.)
3.3	耐压测试 Dielectric Withstand Voltage	输入一定电压AC250V(50~60Hz,电压值见图示)1分钟,漏电流为2mA,测试邻近端子间。 Apply certain voltage AC250V (50~60Hz, detail see drawing) for 1 minute between adjacent contacts of the connector with 2mA leakage sensitivity.	耐压测试机 Puncture Tester	没有绝缘破坏,电弧等异常。 No arcing, break-down and damaging insulation.

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4. 机械特性 Mechanical Characteristics

No.	项目 Item	测试方法 Test Method	测试设备 Equipment	特性要求 Requirements
4.1	操作力 Operation Force	垂直操作开关按键，逐渐施力，测量开关到达全部工作行程时所需的最大操作力度和回复力度。 Operate the keystroke of the switch vertically, and then increase press strength graduslly ,Measured maxi-mum operation force to be need while the travel of switch is full and reply dint degree.	推拉力计 Push-Pull Force Gauge	见图面 See Drawing
4.2	行程 Pre-travel Full-travel	垂直操作开关按键，量开关顶端导通时的移动距离或最大移动距离。 Operate the keystroke of the switch vertically, the travel distance of keystroke moving from its free position to operation position or maximum moving distance shall be measurement.	PT 治具 游标卡尺 PT Tester Vernier Caliper	见图面 See drawing
4.3	端子强度 Load Strength of Terminal	于开关端子任意方向施加0.5Kg的力，持续时间1分钟。 Apply 0.5Kg load to teminal of the switch in any direction for 1 minute.	砝码 Poise	端子无脱落，断裂，松动等异常。 Terminal shall be not broken off, Rupture , looseness and other defects.

5. 可靠性测试 Reliability trial

No.	项目 Item	测试方法 Test Method	测试设备 Equipment	特性要求 Requirements
5.1	寿命测试 Operation Life Test	开关置于寿命试验机上连续工作，工作频率低于每分钟30次，工作条件为：DC5V 5mA. The switch would be operated continuously by auto machine at maximum rate of 30 cycles per hours on conaition that the voltage is 5V and the current is 5mA.	寿命试验机 Life Tester	寿命: 100,000次 实验后: 绝缘电阻: 10MΩ Min 操作力: 变化在±50%内 开关外观及结构无损坏。 Life test: 100,000cycles After test: Insulation resistance: 10MΩ Min Operating force: Change should be within ±50% of specified value. No abnormalities shall be recognized in appearance and construction.

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5. 可靠性测试 Reliability trial

No.	项目 Item	测试方法 Test Method	测试设备 Equipment	特性要求 Requirements
5.2	可焊性测试 Solder ability Test	端子顶部被浸入焊锡炉中，温度为230±5℃，时间5±1秒。 The top of the terminals shall be dipped in the solder bath at 230±5℃ for 5±1seconds.	控温锡炉 Solder Stove	引脚至少95%上锡。 95 percent of terminals shall be dipped.
5.3	耐焊接热试验 Resistance to Soldering-heat Test	端子焊接部分浸入焊炉，焊炉温度260±5℃，焊接时间5±1秒。（焊接时不可于端子施加外力）。 Terminals shall be dipped in the solder bath at 260±5℃ for 5±1 seconds without additional force for	控温锡炉 Solder Stove	本体无变形，能满足于机械、电气性能。 Appearance should be not electrical and mechanical characteristics shall be satisfied.
5.4	耐高温测试 Resistance to Heat Test	放置在温度80±2℃环境中96小时后，再置于正常条件1小时后测试。 The switch shall be stored at a temperature of 80±2℃ for 96 hours, Measurements shall be made after it be subjected to the standard conditions for 1 hour.	高低温试验机 High & Low Temperature Tester	外观，机械及电气性能均符合要求。 Appearance, electrical and mechanical characteristics shall be satisfied.
5.5	耐低温测度 Resistance to Cold Test	放置在温度-25±3℃环境中96小时后，再置于正常条件下1小时后测试。 The switch shall be stored at a tempetature of -25±3℃ for 96 hour, Measurements shall be made after it be subjected to the standard conditions for 1 hour.	高低温试验机 High & Low Temperature Tester	外观，机械及电气性能均符合要求。 Appearance, electrcal and mechanical characteristics shall be satisfied.

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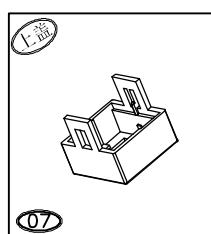
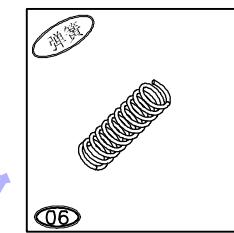
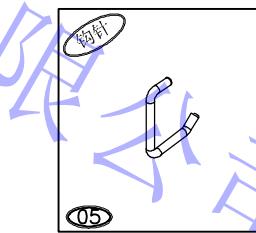
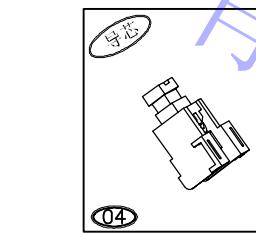
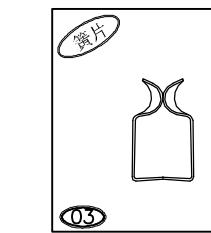
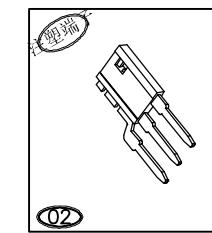
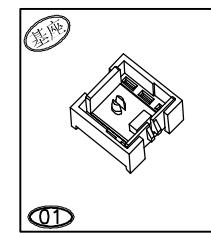
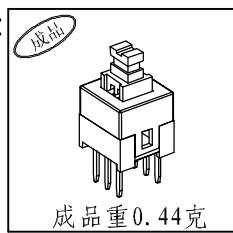
5. 可靠性测试 Reliability trial

No.	项目 Item	测试方法 Test Method	测试设备 Equipment	特性要求 Requirements
5.6	耐湿性测试 Resistance to Humidity Test	放置于温度40±2℃，相对湿度为90~95%环境中96小时后，再置于正常条件下1小时后测定（注意要擦去水滴） The switch shall be stored at a temperature of 40±2℃, relative humidity 90~95% for 96 hours, Measurements shall be made after it be conditions for 1 hour (Wipe out water drip).	恒温恒湿箱 Temperature & Humidity Tester Chamber	外观，机械性能及接触电阻均符合要求。 Appearance, mechanical characteristics and contact resistance shall be satisfied.
5.7	盐雾实验 Salt Mist Test	试件在下述实验后测量： 1. 温度： 35±5°C 2. 盐溶液浓度： 5±1% (质量百分比) 3. 试验时间： 24小时， 4. 试验后，将盐沉积物用水冲掉。 The switch shall be checked after following test: 1. Temperature: 35±5°C 2. Salt solution: 5±1% (Solids by mass) 3. Duration: 24 hours, 4. After immersing, salt deposit shall be removed by running water.	盐雾试验机 Salt Spray Tester	在金属件上没有严重腐蚀斑点。 No remarkable corrosion shall be recognized in metal parts.

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第6页

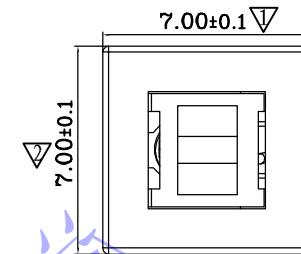
图示：



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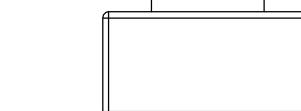
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遵守欧盟WEEE和ROHS之规定

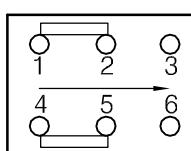
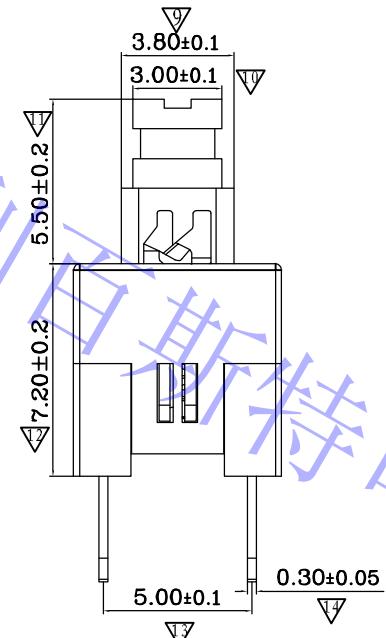
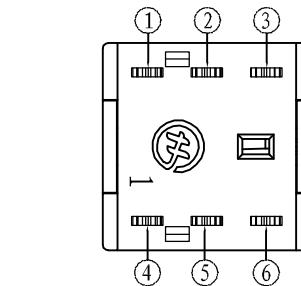


3.80 ± 0.1

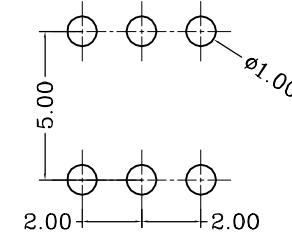
2.00 ± 0.1



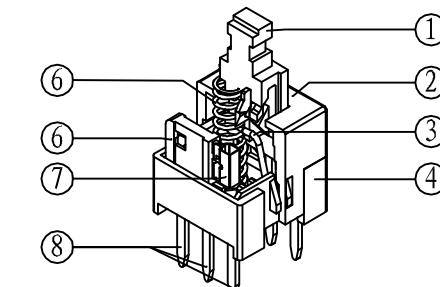
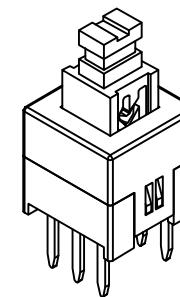
3.50 ± 0.2



电路图



印刷电路板焊接处尺寸图



技术参数

- 额定电压: DC30V 0.1A
- 接触阻抗: $100m\Omega$ Max
- 绝缘阻抗: $100M\Omega$ Min (DC500V)
- 耐高压: 交流250伏(50-60赫兹)持续1分钟
- 操作力: $230 \pm 50gf$
- 寿命: 100,000次.
- 行程: 2.4 ± 0.2 mm
- 运行类型: 自锁

序号	产品型号	端子编号	数量	材料	备注
⑧	端子	6	黄铜	镀银(Ag)	
⑦	簧片	2	磷铜	复银	
⑥	注塑端子	2	PA66	黑色	
⑤	弹簧	1	钢丝	素材	
④	底座	1	PBT	黑色	
③	钩针	1	铜丝	素材	
②	盖子	1	POM	白色	
①	导芯	1	POM	蓝色	

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								角度	$\pm 2^\circ$	工程	设计	刘志勇	日期	2006.07.25	名称: 7x7自锁/无锁 黑底蓝盖	
								$30 - 10$	± 0.30	图面	审核		日期			
								$20 - 10$	± 0.20	核准			日期			
	A0							$L \leq 10$	± 0.10	图面编号:	P1070D10011A				料号: EL-7701 PS自锁/无锁	
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